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Mycotic Infection of the Prepuce of the Bull

By

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LITERATURE

That moulds may occasionally be pathogenic to bovines has been known for some time. Smith (1920) first drew attention to the presence of a mould in lesions of the foetal membranes of an unopened uterus collected from an abattoir. Gilman & Birch (1925), Jungherr (1935) and others recorded mycotic infections of the reproductive tract of cows, and discussed the relationship of such infections to abortion and sterility. The various species of moulds isolated from the genital tract of cows belong to the genera aspergillus, mucor, rhizopus and absidia, the two species in the last named genus being *Absidia ramosa* and *Absidia lichthemi*. The incidence of members of the aspergillus genus seems to be commoner than others. Thus Bendixen & Plum (1926), of a total of 17 cases, found aspergilli in eight, aspergilli and absidias mixed in seven, and absidias alone in two cases. Plum (1932) extended his studies to 2,027 placentas and discovered mycotic infections in 121 specimens by microscopic evidence or cultural methods. Of the infected placentas, 73 per cent. yielded aspergilli, 21 per cent. absidias, and 6 per cent. mucors and rhizopus. Jungherr (1935) examined material from four abortions and found aspergilli in two and mucors in the other two cases.

In an attempt to establish the pathogenic nature of moulds, Gilman & Birch (1925) produced placental infection experimentally by intravenous injections. Bendixen & Plum (1926) further showed that normally saprophytic but potentially pathogenic moulds grew best at 37° C., and placental specimens artificially infected with moulds did not show growth in less than 60 hours at room temperature. Almost all workers agree that the abortion caused by moulds occurs in late pregnancy. Plum (1932) quotes 28 abortions occurring in the first six and 85 in the last three months of gestation—of the latter 38 occurred between the seventh and eighth month. In abortions recorded by Jungherr (1935), one occurred in the fifth, one in the sixth, one in the seventh and one in the eighth month. Of 15 abortions observed by Bendixen & Plum (1932), one occurred in the fifth month, two between the sixth and seventh, three between the seventh and eighth and nine in the last month of gestation.

As far as we have ascertained, none of the workers has reported mycotic infection of the reproductive tract of the bull, nor suggested the spread of such an infection through coitus. Our investigations suggest that not only can the bull harbour moulds in its prepuce, but also that a mechanical transmission of mycotic infection may occur.

INVESTIGATION

We were asked to investigate the causes of sterility in a pedigree-attested, abortion-free, Jersey herd in December, 1946. Attention was drawn to two factors: (*a*) the herd bull had gradually become slow at service and was becoming slower, and (*b*) two cows had aborted within four weeks' time.

History.—The seven-years-old bull was working normally up to the end of 1945. In 1946 he became progressively slow at service and, at times, failed to serve cows altogether. His daily ration consisted of 4 lb. of dairy concentrates and 40 lb. or more of hay; he was given very little exercise. As regards the cows, an imported cow (M), which was a new acquisition, calved on her way to this herd. Soon after joining the herd, she conceived following service by the above mentioned bull, but aborted in the seventh month. After serving cow (M), the bull served another cow (L) about two weeks later and was not used thereafter until October, when he served a heifer. While cow (L) aborted in the eighth month, the heifer bore her calf normally. Both the cows showed vaginal discharge for several days after abortion.

Field Examination.—The internal and external examination of the genitalia of the bull did not reveal any gross abnormality. His abdomen was, however, pendulous, and there was some evidence of preputial catarrh. He was seen to masturbate as well. Efforts to collect semen by means of an artificial vagina failed, although the cow employed was in heat.

Laboratory Examination.—The preputial washings (2 per cent. glucose in normal saline) of the bull and the cervical mucus of cows (M) and (L) showed no evidence of *Trichomonas foetus*. Blood samples did not show *Brucella abortus* agglutinins, while tuberculosis had already been ruled out. Both the preputial washing and the cervical mucus of cow (L), however, showed profuse growth of *Absidia corymbifera* along the lines of inoculation of the culture plate in 48 hours at 37° C. While the mould obtained from cow (L) never grew at room temperature, that from the bull showed slight growth after several subcultures spread over a period of three months. The mould could not be isolated from cow (M) as explained later.

Advice.—Since the bull's slowness at service was attributed to his paunchiness, the owner was advised to cut down his daily ration of roughage to 25 lb. and increase concentrates to 8 lb. with regular exercise for 45 minutes every day. It was advised that the cows be irrigated with Lugol's solution of iodine.

Re-examination.—The herd was again examined in February, 1947. The bull's paunchiness and preputial catarrh had disappeared, masturbation had ceased, and he was serving normally. His prepuce, however, still harboured *Absidia corymbifera*. Of the two cows (M) and (L), the former had been sold, while the latter was pregnant. Further observations at this stage had unfortunately to be abandoned owing to change in ownership and location of the herd.

DISCUSSION

The evidence suggests the pathogenic nature of *Absidia corymbifera*. Firstly, the organism, as isolated from the preputial washings of the bull and the vaginal discharge from cow (L), showed profuse growth (even on an imperfect medium like 5 per cent. ox blood agar) at 37° C., there being no growth at room temperature. Secondly, *Absidia corymbifera* is closely akin to *Absidia ramosa*, which has been associated with sterility in cattle and has also been successfully used in the experimental production of abortion (Bendixen & Plum, 1926). Thirdly, the bull as well as the cows (M) and (L) showed clinical symptoms—preputial and vaginal catarrh with late abortions—similar to those recorded in cows with mycotic infection (Jungherr, 1935). This view was further strengthened by the fact that all the animals were apparently free from trichomonad infection, tuberculosis, and brucellosis. The failure to recover the organism from cow (M) on the first visit and from cow (L) on the second visit is explicable on the assumption that, at the time of these examinations, they had either cleared themselves of this infection or it was confined to their uteri only (Smith, 1920; Gilman & Birch, 1925; and Jungherr, 1935).

There are, however, two points which leave some doubt as to the true pathogenicity of *Absidia corymbifera*. Firstly, this mould has been isolated from cases of ringworm in cattle and from abscesses of an alpaca from the zoo (Ainsworth, 1947). Secondly, even in the case of the bull in question, although his preputial catarrh had disappeared on the second visit, he still harboured the mould in his prepuce.

The mode of transmission in the mycotic infections of bovines has long been the subject of controversy. Jungherr (1935) eliminated the possibility of infection through the digestive tract and considered it as a primary respiratory infection which metastasised in the uterus rather than an ascending infection of the genital tract. Gilman & Birch (1925) and Bendixen & Plum (1926) held a similar view, and produced infection by intravenous injections of the organism. However, we are of the opinion that coitus is one of the very likely avenues of such an infection. Our observations lead us to suspect strongly that the herd bull acquired this infection from cow (M) and conveyed it venereally to cow (L). It may be added that mycotic infections of the prepuce of the bull are more common than is usually recognised. Although 5 per cent. ox blood agar is not a very suitable medium for the growth of moulds, we have recorded mycotic infections with the help of this medium in bulls other than that referred to above. Our preliminary studies show that liver infusion agar with gentian violet and brilliant green is a better medium than ox blood agar for this purpose.

Ainsworth (1947) recommends beerwort agar as a satisfactory medium for growing moulds.

As the onset of masturbation in the bull was closely associated with the commencement of preputial catarrh and slowness at service, it is believed that he acquired this vice through preputial catarrh coupled with standing idle for a considerable period. Owing to a possible association of masturbation with sterility (Williams, 1947), the detection of this vice and steps to combat the causative factors should be taken up promptly.

Summary

(1) The paper records the infection of the prepuce of a bull (and the vagina of a cow in the same herd) with *Absidia corymbifera* for what appears to be the first time. (2) The possibility of the transmission of this organism through coitus and its pathogenic nature for the bovine genitalia is suggested. (3) Preputial catarrh, probably resulting from mycotic infection, coupled with slowness at service and standing idle, was held responsible for the vice of masturbation in the bull.

Acknowledgments.—We are indebted to Professors T. Dalling and H. D. Kay and Dr. N. S. Barron for their guidance and continued interest in our work, and to Dr. G. C. Ainsworth for typing the organism discussed in this paper.

References

Ainsworth, G. C. (1947.) Private communication.
Bendixen, H. C., & Plum, N. (1926.) Schimmel-pilze (*Aspergillus fumigatus* und *Absidia ramosa*) als Abortus Ursache beim Rinde. *Acta path. microbiol. scand.* **6**. 252.
Gilman, R. L., & Birch, R. R. (1925.) A mould associated with abortion in cattle. *Cornell vet.* **16**. 81.
Jungherr, E. (1935.) Mycotic affections of the bovine reproductive system. *J. Amer. vet. med. Ass.* **86**. 64.
Plum, N. (1932.) Verschiedene Hyphomyceten—Arten als sporadischer Falle von Abortus beim Rinde. *Acta path. microbiol. scand.* **11**. 159.
Smith, T. J. (1929.) Mycosis of the bovine foetal membranes. *J. exp. Med.* **31**. 115.
Williams, W. L. (1947.) The Diseases of the Genital Organs of Domestic Animals. Ithaca, N.Y. Published by the Author.

THE NATIONAL FARMERS' UNION

Mr. James Turner has been unanimously elected by the Council to continue his leadership of the N.F.U., with Mr. E. H. Gardener, an authority on horticultural matters, as Deputy President and Mr. H. Woolley as Vice-President. The average age of these three leaders is 40.

The Farmer and Stock-Breeder voices the general feeling that the passing from the triumvirate of Mr. Jack McClean is a matter of regret. "His contribution to the pool at 45, Bedford Square, has been years of hard, unselfish work, in which he displayed an unusual aptitude for successful committee affairs, a close attention to detail, and an inspired ability to digest and interpret legal and departmental documents. His was a contribution from which the whole industry will reap a rich harvest for many years. As Mr. McClean was unanimously co-opted to the Council for three years his forthright independence will remain a valuable asset.

"So the Union sets out on another year of high endeavour to consolidate undoubted achievements and to address itself to the problems of increased production. It begins with a membership which stands at the all-time record of 182,254, being 10,000 up on last year. The national income has increased by £10,000 to a total of £444,207. The goal is now £500,000 and to reach it is a challenge to every member."

* * * * * *

The news that Bargower Cherry 29th, supreme champion at the Dairy Show, has died as the result of being gored by a byre mate, provides the best answer to those people who have written us letters during the past few weeks about the beauty of the Ayrshire's horns. Mr. Drummond's loss is a high price to pay for an aesthetic consideration.—*Farmers' Weekly.*

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In a recent talk on "Recent Studies in the Composition of Milk," Dr. S. J. Rowland, of the National Institute for Research in Dairying, Reading, asserted that milk quality in Britain has gone down during the last 15 to 20 years, and the trend seems to continue. This quality-fall tendency is not confined to any one dairy cattle breed, and emphasis on winter milk production is one reason given for the decline. His suggested remedies include the use of bulls with "high quality milk production" records among their parents, and better farm management.

The Supplementary Feeding of Pigs

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Under prevailing conditions, pig keeping is entirely dependent upon home-produced feeding-stuffs. The time when a pig-keeper could call on his feeding-stuffs merchant and order unlimited quantities of balanced meal or concentrates of any type is past. At present he must use his ingenuity and rear and fatten pigs on home-grown bulky foods, by- and waste-products, and the small amount of meal allocated, and do it in such a way that a small monetary profit results from his toil. It is a difficult, thankless task, but it can be done, and there are various ways and means leading to satisfactory results. Success depends mainly on the ability to ensure that all the essential nutrients are present in the ration, this in turn requiring a knowledge of the composition of each of the feeding-stuffs available at any particular time. The state of development of the animal should always be kept in mind as obviously the requirements of a suckling piglet will differ from that of a fattening pig or breeding sow.

Swill and potatoes are the two mainstays of present-day pig feeding. Either of these may, however, lead to considerable trouble if they are not utilised properly. The table at the end of this article gives compositional details of various types of swill and of various potato products. The very great variation in the composition of swill is striking. The name "swill" conveys really no information whatsoever on the nutritive value of the product to which it is attached. On one kind of swill it is possible to fatten pigs satisfactorily without any supplementary feeding, whilst with another, fed in a similar way, digestive disturbance, loss of weight and even death may be encountered. The salient points regarding the use of swill are:—

(1) Swill should be free from pathogenic organisms—boiling for one hour, which is compulsory by law, will ensure that.

(2) An excess of water is to be avoided. Usually swill has a high moisture content and only very little water should be added for boiling. Swill with an excessive moisture content might cause an insufficient nutrient intake.

(3) Adequacy of protein in the ration must be safeguarded. Most of the swill available at present is low in protein and therefore an appropriate amount of a protein supplement should be added. Fish meal, meat meal and yeast are the desirable main protein supplements, but mixed proteins of animal and vegetable origin will also give satisfactory results.

(4) Depending on the nature of the swill a mineral supplement might be necessary. A 2 per cent. addition of a simple mixture of three parts limestone and one part of common salt will usually prevent any gross mineral deficiency.

(5) To ensure that no vitamin deficiency is encountered an addition of a little cod-liver oil, say 2 oz. per pig weekly, is usually well worth while. The supply of green fodder will also help to counter a possible vitamin A deficiency. When green fodder is given, its protein contribution should not be overlooked.

(6) Some swill contains an excess of fat. This should be skimmed off after steaming.

(7) Swill should be introduced very gradually into the pig's diet.

A concentrated swill is nowadays supplied by local authorities as so-called "pudding." In some cases it has been reinforced with a protein supplement by the makers but more often this must be done on the farm. Liquid yeast, usually available in the neighbourhood of a brewery, can effectively cover this deficiency; one pint per 7 or 8 lb. of the pudding has been found to give satisfactory results. Occasionally dried kitchen waste is on the market: this might be just ordinary swill the water content of which has been reduced or a completely balanced mixture.

Up to 70 per cent. of the diet of fattening pigs can successfully be given in the form of potatoes. Raw potatoes should be avoided because of their content of solanin, an alkaloid which in large quantities is poisonous. This can easily be destroyed by boiling or steaming; about 45 minutes is usually the time allowed for this operation, after which the potatoes should be cooled to about blood temperature and fed as soon as possible. The water used for boiling should be discarded. It is a worth-while recommendation to wash the potatoes before boiling or steaming. Being poor in protein and minerals, potatoes must be supplemented by feeding-stuffs which supply these essential nutrients.

Potato silage has about the same nutritive value as steamed potatoes. If properly made it is usually well liked by the pigs. The acids contained in potato silage are mainly lactic acid and a little acetic acid, both of which do not cause any digestive trouble or have any other detrimental effect upon the animals. An excellent food for pigs can be produced by ensiling potatoes with clover, lucerne or young grass. There are also a number of potato pro-

ducts on the market such as potato flakes, cossettes, etc. These dried potato products are usually used as a part of a meal mixture in place of a proportion of cereals. It is noteworthy that potato peelings, which often form a considerable proportion of the swill, contain a valuable amount of nutrients, whereas fresh potato leaves should not be fed to domestic animals.

Both swill and potatoes are bulky foods which give best results when fed in conjunction with a small quantity of meal. A method which embodies this recommendation is known as the Lehmann system. It consists of feeding a fixed amount (usually 2¼ lb. per pig per day) of meal throughout the fattening period. In addition bulky foods from the farm, potatoes, sugar-beet, mangolds, etc., and swill, or waste foods from industry are fed *ad libitum*. Experience has shown that a mixture of potatoes and either sugar-beet or mangolds gives better results than either of the latter foods alone. In the Lehmann method the composition of the basic meal allowance is of the greatest importance. It should provide all the essential ingredients which are usually lacking from the bulky foods, *i.e.*, protein, minerals and vitamins.

A very helpful expedient in present-day pig feeding is very often overlooked, namely, the provision of pasture for pigs. It is widely recognised that rearing of good litters is made easier by providing enough exercise and allowing the young pigs to draw from the big source of accessory compounds such as minerals and vitamins which are amply provided by the grassland. It will be generally agreed that good grassland is able to provide all the nourishment required for maintenance of empty gilts and in-pig sows in the early stages of pregnancy, but the importance which pasture can play in supplying a part of the nourishment for in-pig sows in advanced stages of pregnancy and during lactation as well as for fattening pigs is far less appreciated. Grazing can save a large proportion of the sow's food and it appears to increase the amount of milk in lactating sows. For fattening pigs, besides its food value, pasture offers the best preparation of the young pig's digestive system for the future intensive fattening period. Grass being a voluminous fodder, effects early in life an enlargement of the stomach, thus enabling the animals during the fattening period which follows, to consume more and utilise more effectively the bulky foods such as swill and potatoes which constitute the major portion of their diet. One should, on the other hand, keep in mind that in the case of fattening pigs the grazing should be restricted to save waste of energy, a factor of great importance so far as digestion and economy of feeding are concerned.

The provision of green fodder to pigs kept indoors will also help to save a considerable amount of meal. It also renders the pigs healthier and more resistant to disease. The replacement of meal with green fodder (including lawn cuttings) should be undertaken within limits, say to replace 1 to 1½ lb. of meal, otherwise the growth rate will be adversely affected. The green fodder may also be given as silage.

Ground high quality hay and dried green fodder meals are also valuable as ingredients of the concentrated portion of the pig's diet. Up to 20 per cent. of the mixture for breeding stock may consist of dried green fodder, whilst not more than 10 per cent. should be included for fattening pigs.

Occasionally pig-keepers can obtain a number of waste products like flour mill or bakery sweepings, dried bean and pea pods, tulip bulbs, etc., which may have a considerable nutritive value, and others like cocoa meal, castor bean residue, rose hip residue, etc., which may be harmful. All these products vary greatly in their composition, the knowledge of which is absolutely essential if one wants to make the best use of them.

Composition of Swill and Potato Products

	Moisture.	Crude protein.	Oil.	Soluble carbohydrates.	Fibre.	Ash.
Urban swill (winter—average) ...	75·0	3·7	3·0	14·5	1·4	2·4
Urban swill (winter—poor)	92·0	1·4	0·9	4·3	0·5	0·9
Urban swill (summer—average) ...	75·0	4·1	3·1	12·4	2·4	3·0
Urban swill (summer—poor) ...	90·0	2·0	2·1	4·2	0·7	1·0
Military camp swill (ordinary quality)	75·0	4·2	4·2	12·3	1·5	2·8
Military camp swill (meat rich) ...	68·6	6·4	8·9	13·7	0·5	1·9
Dried balanced swill	10·3	24·8	10·9	29·8	7·8	16·4
Raw potatoes ...	76·2	2·1	0·1	19·7	0·9	1·0
Potato flakes ...	10·8	7·8	0·7	76·2	1·0	3·5
Potato cossettes ...	12·0	8·6	0·5	73·4	2·0	3·5
Potato slices ...	11·0	9·3	0·2	74·0	1·6	3·9
Potato peelings (by hand)	78·8	2·1	0·1	17·0	0·7	1·3

CLINICAL COMMUNICATIONS

Phenothiazine Over-dosage or Idiosyncrasy in Equines *

E. E. HERROD-TAYLOR, M.R.C.V.S.
Leamington Spa

Subject.—Seven-month-old thoroughbreed colt foal, kept in loose box and fed on oats, bran, hay and greenstuff.

6.11.47.—Called in to examine foal. On questioning the groom I found that it had been dosed two days previously with—as the groom said—the same dose for a calf of the same age: about 30 grammes of phenothiazine.

Symptoms.—Malaise, staggering gait, back slightly arched, ears cold; T. 105° F.; pulse frequent and hard; mucous membranes orangy-yellow; haematuria.

Treatment.—Injection penicillin in oil 100,000 units. Injection arecoline. Sodii bicarb. one ounce *b.i.d.* The colt was given plenty of water, bran mashes and treacle, and was well rugged up.

7.11.47.—The foal was a little brighter and the urine was slightly paler. He ate a small mash. Gait staggery; mucous membranes slightly less dirty. T. 104·2° F.

Penicillin in oil (100,000 units) administered and the back was rubbed well along the spine with mustard liniment.

8.11.47.—Eating fairly well; mucous membranes anaemic; ears warmer. He still staggered about. T. 102·4° F. Urine almost normal.

Penicillin repeated; also liniment.

9.11.47.—Much brighter, eating all mashes and a little hay as well. Urine normal; mucous membranes anaemic. Gait slightly improved.

Sodii bicarb. treatment dropped.

12.11.47.—Continued eating well and was improved in his gait, but still rolled a little behind, especially when turning round.

From this day an uneventful recovery was made, with his action improving gradually.

Remarks.—I consulted my principal, Mr. W. P. Stokes, who stated he had seen quite a few cases of inco-ordination following administration of phenothiazine, and that one or two ran a temperature ranging from 102·5° to 103·5° F. He also stated that colicy pains were frequently seen and that enteritis may result in some instances.

I trust that these experiences may help and would be glad if some practitioners would give their dosages for various types of horses.

In this practice the dosage is roughly as follows: Thoroughbred foals six to nine months, one to two drachms; nine months to one year, two to three drachms; one to two years, four to six drachms; adult, one ounce; with an average increased dose for cart horse foals.

* The case now recorded is that which the writer had in mind when forwarding the question (CCXXVIII) published under this heading in the issue of *The Veterinary Record* of January 10th. The case seems atypical, as the subject ran a high temperature for two days, while it is noted that the respondent indicates that, so far as he is aware, inco-ordination of limbs has not previously been recorded in equines, only in pigs.

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A Case of Interest

E. A. SHILLIDAY, M.R.C.V.S.
Olney, Bucks

Subject.—Tricolor bull terrier, bitch, five years old.

7.7.47.—The 63 days were up on 6.7.47. There were no signs of labour; the mammary glands were slightly enlarged, but there was little sign of milk. Her temperature was 98° F. 1 c.c. post-pituitary gland extract was given intramuscularly. This produced uterine movement, but manual removal was required, eight pups, in all, being removed. One pup succumbed after birth. During this period 35 units post-pituitary gland extract were given. One pup was palpated far forward but I was unable to remove it.

8.7.47.—Pup removed by forceps. The bitch was syringed and an enema given. Recovery was uneventful.

23.9.47.—Dermatitis developed on the back; the bitch was listless, hiding in corners and unable to sleep. Breathing was forced and respirations were erratic. Temperature normal. The eyes were slightly sunken. Her condition was very good.

Diagnosis was not made until the urine had been examined.

24.9.47.—*Urine Analysis*: Reaction—acid; sweet smelling; specific gravity 1029; sugar—positive—20 per cent.; ketones—positive.

Diagnosis.—Diabetes mellitus.

No treatment was suggested until the second urine sample had been examined.

28.9.47.—*Urine Analysis*: Reaction—acid; sweet smelling; specific gravity 1030; sugar—positive; ketones—positive.

Treatment Suggested.—Insulin.

1.10.47.—The bitch was restless in the extreme. Appetite good. Continual itchiness. Short-sightedness. Mucous membranes normal. Temperature normal. Thirst not very great. Skin lesions still on back.

Treatment.—Insulin; 1 c.c. (20 units) subcutaneously.

2.10.47.—*Urine Analysis*: Reaction—acid; sweet smelling; specific gravity 1038; sugar—positive; ketones—positive.

The bitch showed no change. She walked in an exaggerated manner with legs lifted above their normal height. Unable to sense food, and lapped instead of prehending it; she was deaf and the eyes were staring, with no expression.

Treatment.—Twenty-five units insulin, with glucose fed by mouth.

4.10.47.—Slight improvement.

Treatment.—Twenty-five units insulin.

6.10.47.—*Urine Analysis*: Reaction—acid; sweet smelling; specific gravity 1037; sugar—positive; ketones—positive.

The bitch was now taking more interest in her surroundings. though her senses were still paralysed. She whined continuously. She was still feeding, but attempting to lap all food, liquid or solid. Very restless, walking about all the time.

Treatment.—Twenty-five units insulin with glucose intravenously.

7.10.47.—*Urine Analysis*: Reaction—acid; sweet smelling; specific gravity 1039; sugar—negative; ketones—negative; albumin—positive.

She was now very excitable and nervous, continually walking and whining. Such was her physical and nervous condition that, on being asked by the owner to do so, I destroyed her. I was led to take this course not only by reason of this request, but because of the lack of knowledge concerning the dosage of insulin and the fact that there was little abatement of symptoms.

Post-mortem examination revealed nothing.

It is probable that the first clinical signs of the condition manifested in the bitch were those of uterine inertia during the confinement.

World Annual Milk Production Record

Mr. R. A. Pierson's pedigree British Friesian cow Bridge Birch has broken the world record for annual production. At the end of 329 days she had given 41,952 lb. and was still giving 151 lb. a day. The previous record was 41,943 lb. in 365 days by the American Holstein-Friesian Carnation Ormsby Madcap Fayne.

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Weekly Wisdom

The number of years a person lives in the world is of no consequence—but even a day spent in true service of mankind is of supreme importance.—Mohandos K. Gandhi.

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Our young people cry aloud for books: the released generation calls for books: the suffering world asks for the glad abundance and free importation of books that we old ones remember from the happy past. Some tell us that there are no ships to bring paper. This is a strange cry, no ships, in a maritime land, when lands not maritime can find ships, almost every week, for the transport of illegal immigrants. It is not a lack of ships that brings this barrenness: it is a lack of will and a lack of light: and by such lacks a great land may be herded into a Dark Age in a very little time.—The Poet Laureate.

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Mr. A. I. Ritchie, the new Chairman of the Border Counties British Friesian Breeders' Club, has congratulated his 80 members on having 100 per cent. attested herds and membership of the recording society.

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Synthetic meat has recently been developed by Dr. Barnet Sure, discoverer of Vitamin "E," at Arkansas University. Reports say that a white powder when cooked with water turns into something like beef steak which not only has the appearance and taste of lean meat but the same protein value. Its main constituent is powdered skim-milk with defatted soya bean meal, brewer's yeast and flour.—*Meat Trades' Journal.*

NEW INSTRUMENTS AND APPLIANCES

A Danish Cattle Bleeding Instrument

E. F. LEWIS, M.R.C.V.S.

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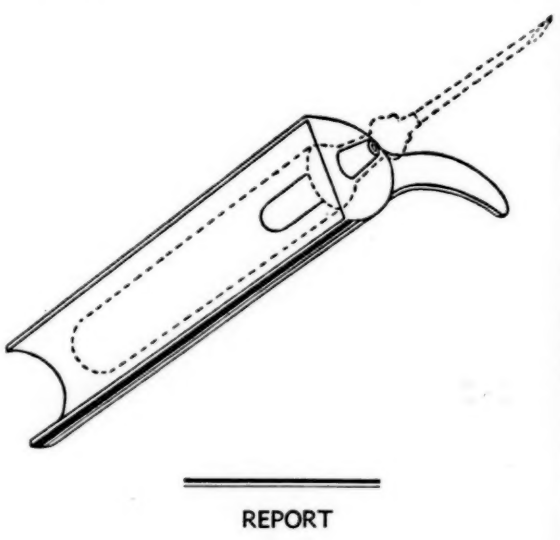
I am indebted to a Danish veterinarian, Mr. E. Borup Jensen, of Frøstrup Station, for a cattle bleeding instrument which may be of interest to *Record* readers.

It consists of a needle mount which is attached to the end of a semi-tubular handle. The needle mount projects down the inside of the handle. The collecting tube is placed in position as shown in the diagram and is held there by the hand (particularly the thumb) which is passed round the handle. The index finger is adjacent to the tongue-shaped projection and gives control and purchase. The needle mount can be modified.

A rubber bulb attached to a tube which fits the needle mount, is provided for cleaning purposes.

The instrument allows the whole operation to be done with one movement and with one hand and prevents undue contamination of the sample. It is apparently in common use in Denmark.



REPORT

[Report of the Hannah Dairy Research Institute for the four years ending March 31st, 1947.]

This report describes work carried out on a large variety of subjects pertaining, in particular, to the storage and conservation of feeding-stuffs. Problems relating to substitute foods for dairy cows, such as iodinated protein, questions concerning the housing of dairy cows including matters of ventilation and the acclimatisation of animals to different conditions are also receiving attention. The purely veterinary aspect has not been ignored, mastitis and calf diseases looming in the foreground. The bacteriology of milk powders and the relationship of water content to the keeping quality have been under careful review.

The report gives only brief remarks concerning the problems dealt with, but a considerable bibliography is appended which will be valuable to the more interested enquirer.

N. S. B.

"A new menace to the work of the Great Ouse Catchment Board has just appeared in the coypu or nutria rat, which makes extensive burrows in river banks and dykes," stated *The Times* in its issue of January 29th, and continued: "The first of these was caught three weeks ago, and, anxious to know if there were others about, the board offered £5 for the next specimen produced. It was rewarded to-day, when another of these creatures was brought in. It was shot at Erriswell, and weighed 16½ lb. The coypu is described as a large semi-aquatic rodent introduced into this country from South America for fur-farming. It may weigh up to 30 lb."

ABSTRACT

[Efficacy of Intramammary Infusion with Penicillin and Diluents on Streptococcic Mastitis. Spencer, G. R., Kraft, M. E., & Underbjerg, G. K. L. (1947.) *Amer. J. vet. Res.* **8**. 325.]

The infected quarters in the cows in 15 herds were treated with penicillin suspended in water, peanut oil or mineral oil. The volume was constant at 10 c.c. They were bacteriologically examined very thoroughly ten days after injection and a further three times at weekly intervals. Two hundred and twenty-four quarters were treated by the injection of 50,000 units in a single dose and 91 by three doses of 15,000 units at 24 hour intervals. The animals were grouped equally between the three methods of injection as regards herd, stage of lactation, number of infected quarters per cow and udder abnormalities. The results are given in the table and are not good, the mineral oil controls though few in number being almost as successful as the penicillin (22 per cent. cures). (In 16 quarters treated with liquid paraffin by the abstractor four or 25 per cent. were cured, bearing out the authors' results.)

Carrier	Number doses	Amount penicillin dose	Quarters treated	Quarters cured	Percentage cured
Water ...	1	50,000	80	25	31
Peanut oil	1	50,000	68	13	19
Mineral oil	1	None	14	0	0
"	1	"	4	0	0
None ...	—	"	4	0	0
Water ...	3	15,000	45	15	33
Mineral oil	3	15,000	45	27	60
"	3	None	23	5	22

There was no great difference whichever vehicle was used. The authors consider that their critical method as assessing "cure" was responsible for the low percentage of cures, but it is possible that their doses were so chosen as to be rather low for either single or multiple injections.

In one experiment estimation of penicillin showed little difference in concentration after eleven hours whichever method of injection was used, but leucocyte counts and chloride and catalase estimations showed the peanut oil to be less irritating than either water or mineral oil.

P. S. W.

SCOTLAND'S FIRST A.I. CENTRE

Scotland's first artificial insemination centre was officially opened last week at Hoddam Castle, near Annan. The centre has already been in operation a month, and it is hoped that the area served, now covered by a 15-mile radius, will be extended.

The opening ceremony was performed by Sir Patrick Laird, Secretary to the Department of Agriculture for Scotland, who said that the Dumfriesshire farmers had declined State assistance, carry-through their pioneering effort entirely by voluntary aid and gifts. Until this scheme started, Scotland had shared with Switzerland the doubtful distinction of being the only European countries not to have embarked on artificial insemination, which was developed on a scientific scale in Russia early this century.

The Advisory Committee have planned to develop a research station at Fenwick whenever building materials become available.

* * * * *

INSPECTION OF RIDING SCHOOLS

The Wiltshire News reports that Bradford (Wilts.) and Melksham Rural District Council is to ascertain how much it will cost for a veterinary surgeon to make at least one inspection every year of riding school establishments in the Council's area.

This arose out of a letter from the National Equine League advising the Council of its powers in having riding schools inspected.

Mr. A. R. Gifford said he understood in that Council's area there were riding schools at Whitley, Cottles and Limpley Stoke. Those schools were well run, but there were riding schools in some parts of the country where there was a suspicion of cruelty and where horses were insufficiently fed. He agreed that Council should have the riding schools in their area inspected.

The Clerk was asked to find what the cost of inspecting the riding schools would be.

IN PARLIAMENT

The Animals Bill

Part I*: Eradication of Bovine Tuberculosis

The Minister of Agriculture (Mr. Thomas Williams), moving the Second Reading of the Animals Bill, in the House of Commons on February 2nd, said, in the course of his speech: The purpose of Clause 1 is simply to extend the authority to make payments, which was given under earlier Acts of Parliament, and which, if not renewed, would expire on September 30th, 1948. Payment of a bonus on milk from attested herds was first authorised in the Milk Act of 1934, for a period of four years. However, Section 20 of the Agriculture Act, 1937, extended the period and broadened the basis of the payments that might be made. This enabled the Tuberculosis (Attested Herd) Scheme of 1938, which replaced the earlier scheme, not merely to continue bonus payments of 1d. per gallon and some financial assistance towards qualifying tests, but also to provide, as an alternative to the milk bonus, payments on a "per head of cattle" basis for the benefit of owners of beef herds and other herds from which little or no milk at all was sold. Section 20 of the 1937 Act thus represented a definite change in objective, and encouragement of voluntary eradication of tuberculosis was no longer restricted to dairy herds merely to assure a pure milk supply, but was extended to all herds with the object of eliminating one of the worst forms of wastage in agriculture and increasing the productivity of cattle.

The payment in the form of the milk bonus was continued simply for its convenience. But it should be noted that the purpose of these payments was quite distinct from that of the quality milk premiums payable, originally, under the milk marketing scheme, and since continued by the Ministry of Food. The period for making payments under the 1937 Act was extended until September 30th, 1948. It had been hoped in 1939 that, by 1948, the attested herd scheme would be so firmly established as to be able to run on its own impetus. Unfortunately, this hope was frustrated by the war. The scheme was rapidly expanding, but it had to be closed to new entrants, except those holding licences to produce tuberculin tested milk and who wished to proceed to the attestation stage.

Therefore, practically no further progress could be made until the middle of 1944, when the restriction on entry was removed. However, the increase in 1943 of the quality premium for tuberculin tested milk, from 2½d. to 4d. a gallon, acted as an indirect incentive to attestation, and there has been a continuous flow of new entrants ever since. There are now nearly 1,200,000 attested cattle in Great Britain, or more than one-eighth of the total cattle population. I think we must give Scotland all the medals for making much more progress than was made in Wales or England, although, in three counties in Wales at all events—Pembroke, Cardiganshire and Carmarthen—they have done magnificently. England, unfortunately, lags hopelessly behind.

I said earlier that the 1937 Act represented a change of objectives. It provided means for initiating large-scale plans for the eradication of animal diseases, and the intention was to concentrate, first of all, on the reduction of bovine tuberculosis. Preliminary discussions have already taken place on a long-term plan for the reduction of tuberculosis, area by area. An essential feature of any such plan must be the active encouragement of voluntary attestation to secure the maximum response in prospective eradication areas before compulsory measures are finally applied.

For this purpose it is necessary, therefore, to reintroduce the attested bonus scheme for all types of herd. Clause I will continue the power to make such payments. It is difficult to say how long it might take to clear the whole of the country of bovine tuberculosis. This will obviously be determined by a number of factors, including the extent to which we can provide the necessary veterinary man-power and also by the supply of attested cattle for replacements in those areas. It is generally agreed by those who have tried to examine the problem that it cannot take less than ten or 15 years.

Major Sir Thomas Dugdale: Before asking the Minister one or two questions, I must refer to the Tuberculosis (Attested Herds) Scheme of 1938, which started with very successful results. I cannot, however, agree with the Minister that we should be satisfied with the present position. It is difficult, going round the countryside to-day, to perceive any sense of urgency. After making every allowance for the inevitable setbacks due to the war, to have one-eighth of the cattle population cleaned in ten years is, in my view, a very small percentage. I urge the Minister to press forward his plans.

* Owing to the length of the debate, extracts of the discussion on the Licensing of Stallions will be published in our next issue.

I would like now to ask the right hon. Gentleman one or two specific questions. Is he satisfied that there are to-day sufficient veterinary surgeons available for T.T. inspection purposes? I should be in entire agreement that it is of no value to the nation to press forward with this long-term scheme, which is to divide the country up into areas, unless there are sufficient veterinary surgeons to do the job satisfactorily.

My final question on this part of the Bill really refers to the disposal of milk from attested herds. There is a widespread belief that in many instances this milk is added to the common pool and mixed with unclean milk. Surely, that makes nonsense of the whole thing. How can producers believe that the Government are in earnest when they find their neighbours taking great trouble, very often at great expense, to produce clean milk and become attested only to see the milk put into the common pool with milk which may or may not be clean, from other parts of the country?

Mr. Alpass: I welcome this Bill, which is designed to continue the grants with the object of eliminating tuberculosis among our cattle. I do not think anyone can contemplate with any degree of complacency the fact that unless much greater progress is made in the future, it will take 25 years before our herds are clear of this disease. I favour the establishment of a State veterinary service. I believe that there will have to be some degree of compulsion before we are able to achieve the progress we all desire. I am aware that this would mean a very large increase in the number of veterinary surgeons, but in this connection I am glad to note that the Minister has already taken steps to increase the number.

I hope that the number of veterinary surgeons will be increased as rapidly as possible, because statistics prove, without any doubt, that there is a very close connection between the incidence of disease among cattle and the proportion of veterinary surgeons to the number of cattle. I have seen figures showing that, with the exception of France, this country has the smallest number of veterinary surgeons compared with any other country with dairy herds. It is curious to note that this country has, with the exception of France, the greatest amount of preventible diseases.

My second suggestion is that owners of known reactors should be prevented from selling them to other farms.

Mr. Hurd: This Bill can lead to great things if the Minister will give dairy farmers and the veterinary service their head in clearing the country of bovine tuberculosis. I, personally, feel that the time has come for the Minister to give a much more vigorous lead in this matter. I am thinking not solely from the farmers' point of view, but of children who are still being attacked by bovine tuberculosis. We are only tinkering with this problem if we proceed by the cautious stages which the Minister promises us by this Bill.

We need more veterinary practitioners. I do not agree about the desirability of a State veterinary service. Let us, first of all, see how we get on with the State human medical service before we apply a State service to animals. It is quite clear that we need not only more veterinary practitioners, which means more accommodation in the veterinary schools and better professional prospects. There are some areas in Berkshire and Wiltshire, where local farmers would support the Minister wholeheartedly if he said that in a year's time, or two years', he would make a certain area, say, five miles by ten miles, or whatever size he thought fit, into a clean area. That would be making a start, and the snowball would grow until the whole county, and then a group, would have been cleared.

Mr. Price: I am wondering whether we shall not have to consider some form of compensation. Then there is the important question of the dispersal of reacting animals. I think there should be a scheme whereby these reactors should be taken over and disposed of for meat. The present situation is most unsatisfactory. The disease is being spread by reactors being flung on the market.

Mr. Alpass: Owners of known reactors should not be allowed to sell them to other farmers.

Mr. Dye: We are told the main reason for the present rate of progress is the limited number of veterinary surgeons available to operate the scheme. Surely it would be possible to train other people as assistants, who could help carry out the work under the supervision of veterinary surgeons? It does not require a fully trained veterinary surgeon to carry out all the work in connection with the testing of cattle.

Mr. Scott-Elliot: We must build up a system of attested areas into which no one will be allowed to bring cattle which are non-attested.

The Joint Parliamentary Secretary to the Ministry of Agriculture (Mr. George Brown): A great deal of discussion has taken place between the Government and various responsible bodies to see what can be done to increase the potential supply of veterinary surgeons. Recently, we have introduced a modification of the old testing arrangement. That will also help us to push on a bit faster.

We agree that we want to make faster progress, and we are having discussions in the industry with the farmers' unions and all the bodies involved as to the next steps.

We are discussing a much bigger scheme—the freeing of areas and the compulsory measures that may be involved. It is our hope and intention, when we introduce regulations providing for attested bonus payments, to make some modifications in the quality premiums paid in respect of T.T. milk by the Minister of Food. This is one of the things we shall have to discuss, and we must bear in mind the balance of the need for stimulation as against any unreasonable State expenditure. As to the disposal of T.T. milk, that is a matter for the Minister of Food. I understand that it is largely a question of transport. It is a matter in which we are very much in agreement with him.

We have had a State veterinary service since 1937, composed of some 300 members, who are doing valuable work. I pay a great tribute to the Socialist foresight of the Conservative Government of that day, which set up that service and which we ought not to disown now. The point made about the selling of reactors; their culling or their slaughter is important, but it would be very difficult to deal with it in the cavalier way which was suggested. There would be a catastrophic drop in milk production and in cattle generally if that were done. It must be done as a process.

The National Health Service

In the House of Commons on Monday last a debate, marked by strong charges by Mr. Bevan against B.M.A. spokesmen and a call by Opposition speakers for an extra effort to meet the doctors' anxieties, took place on the Minister's motion:—

> "That this House takes note that the appointed day for the National Health Service has been fixed for July 5th; welcomes the coming into force on that date of this measure, which offers to all sections of the community comprehensive medical care and treatment and lays for the first time a sound foundation for the health of the people; and is satisfied that the conditions under which all the professions concerned are invited to participate are generous and fully in accord with their traditional freedom and dignity."

He said that for the last six months there had been a sustained propaganda in newspapers supporting the Conservative Party which had resulted in grave misrepresentation as to what was the nature of the health service, and of the conditions under which the medical profession were asked to enter the service. There had been even worse misrepresentation sustained by a campaign of personal abuse from a small body of spokesmen who had consistently misrepresented the great profession to which they were supposed to belong.

He made a distinction between the hard-working doctors who had little or no time to give to these matters and the small body of raucous-voiced people who were alleged to represent the profession as a whole. So much misrepresentation had been engaged in by the B.M.A. that the doctors voting in the plebiscite were doing so under a complete misrepresentation as to what the health service was. It had been frightening to speak to some doctors and to learn the extent to which their representatives had failed to inform them about the facts of the case.

The B.M.A. in the first place said they could not accept the abolition of the sale and purchase of practices. Yet this was recommended by the profession's own Health Commission; they had voted for it in their own plebiscite. All the Government had done was to put into the Act the recommendation of the best medical opinion. The Government regarded it as being inconsistent with a civilised community and with a reasonable health service for patients to be bought and sold.

The Basic Salary

Many doctors had said the one thing which was offending them was the acceptance of a basic salary as part of the general remuneration. But the first time a full time salaried general practitioner service had been put before the profession was in 1943 by Mr. Ernest Brown. This principle, which was supposed to reveal such Socialist partisanship and to contain the seeds of State regimentation, did not come from a Socialist Minister of Health, but from a Government composed of Socialists, Conservatives, and Liberals, and was presented by a Liberal National. He had rejected this principle because he thought it contained too much of the elements of regimentation.

The Government had decided, and this he had made quite clear during the passage of the Bill, that young doctors could have the opportunity of living decently while they were building up their practices. They desired in this scheme not only to relieve the financial anxiety of the patients but also that of the doctors. It was one of the most deplorable features of the existing system that it put the heaviest burden on the young doctors when they went into practice and probably had young families to look after, a time when they should be freest from financial worry

Partnership Agreement: A New Enquiry

The third argument which had been advanced related to the question of partnership agreements. It had been suggested that it was difficult to see what the Act meant, and how such agreements would remain when the Act came into force. The general practitioner's mind had been confused by B.M.A. propaganda on this point, and there was, naturally, anxiety among them about the effect of the Act on these agreements. In order to clear it up he had decided, with the co-operation of the Attorney-General and the Lord Chancellor, to appoint a legal committee to enquire into it, and to recommend what they thought ought to be done. This was a most unusual procedure, because after Parliament passed the Bill and it became law it was left to the Courts to construe it. But if any further light could be shown on this matter, and a competent legal opinion could find a way in which the clauses could be clarified, he was prepared to recommend the Government to present a Bill to amend that part of the Act and to make it clear where the general practitioners stood.

Appeal Tribunal

Under the existing National Health Insurance Act the protection for the doctor was merely an appeal to the Ministry. Of his own volition he decided that that protection was not sufficient on the ground that the new health service would be universal, and removal from the health service of the future would carry heavier penalties. He therefore decided to put in a tribunal between the local executive councils and the Minister. There was no professional body in Great Britain or the world for which more protection existed.

Concluding, Mr. Bevan affirmed his desperate anxiety to get the medical profession into the scheme enthusiastically and harmoniously, but took strong exception to "organised sabotage of an Act of Parliament."

Opposition Reply

Mr. R. A. Butler, for the Opposition, said the one issue before the House was how to reconcile the individual consciences and convictions of doctors as to the manner in which they felt able to conduct their professional duties with the needs of a national health service which, he believed, the vast majority of doctors wished to serve. The introduction of the scheme was drawing near and the co-operation of the doctors had not yet been secured. This drift was another example of the irresponsible and incompetent administration which was associated with the present Government, and the responsibility for the grave danger in which the health scheme now stood lay at the door of the Minister of Health. The whole stage was ready and set for this reform, and the only person who was unready and unset was the Minister.

The first principle on which the doctors rested their case was that the doctor must be free to practise the art and science of medicine according to his accepted high standards, with due responsibility and with the personal care of and association with his patient. The doctors wanted freedom of professional judgment, speech, and action, and also freedom of writing and publishing. He understood from a recent answer by the Minister that a doctor would be able to write and publish in scientific journals what he liked without any prohibition whatever. Would the Minister confirm that? [Mr. Bevan: There never was any doubt whatsoever.] It was not the basic salary by itself which was causing alarm to the medical profession, but the fact that it might be expanded, and members of the profession might by that door be brought into the State service. If the Minister could allay that apprehension he would have got one stage farther.

There was very little that could not be settled by good will, toleration, and common sense, if the approach was broader than the party approach. They could not nationalise science and it was no good trying to do so. Mr. Bevan would not get agreement unless he got the confidence of the profession. It was important that the health scheme should work by agreement and not by coercion. An extra effort should be made to meet the basic anxieties of the doctors. Health was not a matter for triumphs on one side or the other, personal or party. What was wanted was "a victory for common sense." They hoped and prayed that the spirit of the Act might be carried out. He did not believe it would be the public who suffered as much as the doctors if the impasse continued.

For the Liberals, Mr. Byers put in a plea for reason and good will. Much of the propaganda by the B.M.A. was a direct challenge to the Act itself which Parliament must resist. The sale and purchase of practices was a complete anachronism, and he could not imagine any progressive person believing in it. The dispute had to be settled. The B.M.A. should take the initiative now. If not the doctors should get rid of them and appoint a new committee to negotiate with the Minister.

Dr. Taylor said that if ever there was a bewildered profession it was the medical profession at the moment. The spokesmen of the B.M.A. had spoken in passibnate terms but the burden of the message ranged from a complete emotional denouncement to admissions that the bulk of the Act was good, except on four or five points. The *Lancet*, which was *The Times* or *Manchester Guardian* of medicine, advised the doctors to vote "yes," while the *British Medical Journal*, which perhaps had more in common with the *Daily Express* and the *Daily Telegraph*, urged a contrary vote. If the average practitioner had the time to read these journals he would be in a much better position to come to a decision, but his surgery contained a pile which he had not time to read.

Mr. Linstead said that even the Minister had not understood the root cause of the objections which the medical profession had been taking to the Act. The problem at issue was what were in future to be the relations between the great liberal professions in this country and the State.

Sir E. Graham-Little said that the country was faced with nothing short of a disaster which must mature in three months' time. What assurance could the Minister give that by the appointed day the medical staff at his disposal would be adequate to implement the Act?

Sir H. Lucas-Tooth: A large proportion of the medical profession was of the opinion that the Minister was politically not to be trusted, and this was the greatest stumbling-block to the satisfactory initiation of the new health service.

Conservative Amendment

Mr. Law moved an amendment to leave out from the motion from the word "people" to end, and to add:—

> declines to prejudice in any way the right of individuals in all the professions concerned to express their opinions freely, according to their traditions, and in the interest of their patients, upon the terms and conditions of service under the proposed National Health Scheme.

He said that they all felt that this debate, while the medical profession were in the process of making up their minds on these great issues, would only have the effect of muddying the waters and injecting a further infusion of party politics into issues which had already been sufficiently befouled by party politics. They all hoped that the National Health Service Act could be made effective on the appointed day, but the Minister's attempt to drive a wedge into the medical profession and to make them disloyal to one another was not likely to bring about reconciliation between him and the profession. His (the Conservative) party believed it was wrong to attempt to influence on political grounds the decision of the medical profession, which should be made on the grounds of conscience and judgment alone.

It was a tragedy that the differences between Mr. Bevan and the medical profession remained unsolved. Was it yet too late for him to seek some accommodation with them? The onus was on him, because he was in a very strong position. If he would give way on one of the points in dispute he might find that he had broken the impasse. The public felt generally that if the B.M.A. had been stubborn, so had Mr. Bevan. The Opposition hoped that the National Health Service would come into effect on July 5th, but they felt that the only people who could decide whether the terms and conditions for the doctors were in accordance with their traditional freedom and dignity were the members of the profession themselves.

Mr. Woodburn, Secretary of State for Scotland, said that the B.M.A. and their associates seemed keener to have a fight than to get a settlement. The real issue was whether it was in the public interest that doctors should be allowed to boycott the Act of Parliament.

There was a good deal of evidence that the doctors' ballot was not quite so secret as had been suggested. The ballot itself and what followed from it showed a considerable degree of conspiracy to prevent doctors having a free choice.

The closure was carried by 341 votes to 177—Government majority, 164. The amendment was negatived by 337 votes to 178—Government majority, 159—and the motion was agreed to.

. . . . .

Damage to Hides by Warble Fly

On the motion for the adjournment on February 8th, Mr. John Lewis referred to the effect of the warble fly on the leather industry. Every year leather which could have provided 20,000,000 pairs of children's shoes or 10,000,000 pairs of adult shoes was ruined by this fly.

Mr. George Brown, Parliamentary Secretary to the Ministry of Agriculture, said he doubted how much the matter was one of policing an Order or how far it was a matter of sheer good husbandry. The Minister was now considering whether he should reimpose the order that all cattle affected must be dressed with derris wash.

(*Continued on p.* 78)

NATIONAL VETERINARY MEDICAL ASSOCIATION

Annual Congress at Southport, 1948

The following is the provisional programme of the Association's Congress to be held in Southport from September 8th to 15th.

WEDNESDAY, SEPTEMBER 8TH

Evening reception by the Lancashire Division, with probably a film show.

THURSDAY, SEPTEMBER 9TH

10 a.m.	Opening of Congress by the Mayor of Southport.
10.30 a.m.	Opening of Exhibition of Surgical Instruments, Drugs, etc., by the President, N.V.M.A.
11 a.m.	Paper: "The Tuberculin Test." By Professor T. Dalling, M.A., M.R.C.V.S. Openers of discussion: Mr. G. H. Arthur, M.V.Sc., M.R.C.V.S., and Mr. J. McWilliam, M.R.C.V.S.
Afternoon	Public address. Sir John Boyd Orr, D.S.O., M.C., LL.D., F.R.S., "World Food and Agriculture."
8 p.m.	Civic Reception at the Floral Hall.

FRIDAY, SEPTEMBER 10TH

	All-day visit to the Liverpool Veterinary Hospital, and "Leahurst," for demonstrations.
8 p.m.	President's Reception.

SATURDAY, SEPTEMBER 11TH

Morning	Annual General Meeting.
Evening	May arrange block booking at theatre.

SUNDAY, SEPTEMBER 12TH

Excursions if desired to Blackpool and Lake District.

MONDAY, SEPTEMBER 13TH

10 a.m.	Paper: "Equine Accidents in the Fields of Sport." By Major H. Sumner, M.R.C.V.S., D.V.H. Openers of discussion: Mr. E. Brayley Reynolds, O.B.E., M.R.C.V.S., and Mr. J. S. Cosgrove, M.R.C.V.S.
Afternoon	Paper: "The Present Situation with regard to Food Inspection in England and Wales." By Mr. H. Thornton, B.V.Sc., M.R.C.V.S., D.V.H.
Evening	Annual Banquet—if this can be arranged.

TUESDAY, SEPTEMBER 14TH

10 a.m.	Paper: "Avian Salmonellosis." By Mr. J. E. Wilson, B.Sc., M.R.C.V.S., F.R.S.E. Opener of discussion: Dr. R. F. Gordon, B.Sc., M.R.C.V.S.
11.30 a.m.	Paper: "Canine Leptospirosis." By Miss J. O. Joshua, M.R.C.V.S. Openers of discussion: Dr. R. D. Stuart, M.D., D.Sc., D.P.H., and Miss Susan Mills, M.R.C.V.S.
Afternoon	Divisional (Sectional) Meetings.
Evening	Ladies' V.V.B.F. Dance.

WEDNESDAY, SEPTEMBER 15TH

10 a.m.	Closing Meeting.
11.30 a.m.	Council Meeting.

N.V.M.A. CONGRESS, 1948

September 8th - 15th (inclusive)

List of Hotels in Southport *

	Charge per Day	
	Full Board	*Bed and Breakfast*
LICENSED HOTELS		
Prince of Wales Hotel, Lord Street, Southport (*Headquarters*) ...	30/–	—
Palace Hotel, Westcliffe Road, Birkdale	25/– to 35/–	—
Bold Hotel, Lord Street, Southport	25/–	16/6
Crown Hotel, Liverpool Road, Birkdale	—	12/6
Queen's Hotel, Promenade, Southport	25/–	—
Scarisbrick Hotel, Lord Street, Southport	25/–	—
	21/– 7 days or over	
CONDITIONALLY LICENSED HOTELS		
Alexandra Hotel, Alexandra Road, Southport	25/–	—
Belle Vue Hotel, Lord Street West, Southport	From 35/–	—
Clifton Hotel, Promenade, Southport	22/6 to 30/–	—
Mornington Hotel, Hoghton Street, Southport	23/6 to 24/6	15/– to 16/–
UNLICENSED HOTELS		
Carlton Hotel, Lord Street, Southport	25/–	—
Gables Private Hotel, Hoghton Street, Southport	21/6 to 23/6	—
Sandringham Hotel, Promenade, Southport	21/– to 25/–	Saturday to Saturday bookings only
Waverley Hotel, Promenade, Southport	25/–	—
PRIVATE HOTELS AND BOARDING HOUSES		
Mrs. E. Bartle, Seafield, 2, Irving Street, Southport	14/6	—
Chantrey House, 7, Albert Road, Southport	18/6	12/6
Easemore Private Hotel, 3, Portland Street, Southport	16/6	11/6
Eyredene, 8, Knowsley Road, Southport	17/6	10/6
Franklyn Hotel, 65–65a, Promenade, Southport...	21/–	—
Mrs. N. D. Holt, Derby House, 6, Knowsley Road, Southport ...	17/6	10/6
Hopefield Private Hotel, 12, Albany Road, Southport	17/6	10/6 Saturday to Saturday bookings only
Messrs. Hulley & Shufflebottom, 31, Leicester Street, Southport ...	17/6	12/6
Ivanhoe Private Hotel, 87, Avondale Road, Southport	15/6	—
Knowsley Private Hotel, 2, Knowsley Road, Southport	17/6	10/6
Marlborough Private Hotel, 9, Church Street, Southport	14/–	10/–
Mr. J. W. Matthews, Barrowfield, 37, Leicester Street, Southport ...	18/6	—
Orleans Private Hotel, 8, Lathom Road, Southport	22/6	13/–
Queen's Gate Private Hotel, 49, Queen's Road, Southport	21/–	12/6
Russell Hotel, 56, Promenade, Southport	18/6	12/6
Stafford House, 18, Bank Square, Southport (Mrs. M. W. Howarth)	15/6	10/6
Stella Maris Private Hotel, 25, Promenade, Southport	18/6	12/6
Summerfield Private Hotel, 31, Leicester Street, Southport	17/6	12/6 Saturday to Saturday bookings only
Talbot Private Hotel, Portland Street, Southport	18/6	11/6
Tatley Private Hotel, 83, Manchester Road, Southport	17/6	12/6
Mr. H. Tyson, 39, Bath Street, Southport	15/–	10/6
Willow Bank Private Hotel, 117, Leyland Road, Southport	15/–	10/6 Saturday to Saturday bookings only

*** Members are advised to make reservations by March 25th, otherwise accommodation cannot be guaranteed.**

Questions

Anti-Abortion Vaccine

Lieut.-Colonel Bromley-Davenport asked the Minister of Agriculture whether he is aware that veterinary surgeons experience six weeks' delay in obtaining delivery of supplies of anti-abortion vaccine from the Veterinary Laboratory at Weybridge; and what steps are being taken to improve the position.

Mr. T. Williams: Normally there is no delay in the despatch of anti-abortion vaccine from the Veterinary Laboratory, Weybridge. Owing to unavoidable mishaps in the preparation of this very delicate substance, however, supplies have, for a time, been short of requirements. The position has now improved, and arrears are being rapidly overtaken.

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Attested Cattle

Mr. Hurd asked the Minister of Agriculture what is the total expenditure on the eradication of bovine tuberculosis made under the Agriculture Act, 1937; and the percentage of attested cattle in each county in England, Wales and Scotland.

Mr. T. Williams: During the period from April 1st, 1938, when Part IV of the Agriculture Act, 1937, came into operation, to December 31st, 1947, payments made to owners of attested herds under Section 20 of the Act amounted to £2,590,000. In addition, the cost of tuberculin tests carried out by part-time veterinary inspectors was £1,094,000. It is not practicable to assess the cost of tests carried out by whole-time veterinary inspectors as part of their duties.

The Minister then gave the percentage of attested cattle* in each county in England, Wales and Scotland at the end of 1947.

* These figures will be found in the Statement on the Attested Herds Scheme published in the Notes and News columns of this issue. We hope to publish in an early issue a review of the progress made with the attested Herds Scheme in Great Britain.—*Editor.*

NOTES AND NEWS

Diary of Events

Feb. 17th.—Annual Meeting of the Eastern Counties Division, N.V.M.A., at Norwich (Bell Hotel), 11.30 a.m.

Feb. 17th and 18th.—N.A.A.S. (South-Eastern Province) Conference on "Farming Management To-day," in the Guildhall, Winchester, with farm demonstrations on silage. (*See Note.*)

Feb. 18th.—Meeting of the Comparative Section, Royal Society of Medicine, 1, Wimpole Street, W.1, 5 p.m.

Feb. 18th.—Annual Meeting of the British Society of Animal Production, at the R.A.S.E., 16, Bedford Square, London, W.C.1, 10.15 a.m.

Feb. 18th.—Meeting of the Ayrshire Division, N.V.M.A., at the Hannah Institute, Ayr, 2.45 p.m.

Feb. 19th and 20th.—Special meetings of Council, R.C.V.S., 10, Red Lion Square, W.C.1.

Feb. 21st.—Meeting of the Society of Women Veterinary Surgeons at the Conway Hall, Red Lion Square, W.C.1, 2 p.m.

Feb. 24th.—R.(D.)V.C. Annual Ball, at the Assembly Hall, 54, George Street, Edinburgh.

Feb. 24th.—Meeting of the Southern Counties Division, N.V.M.A., at Southampton (Polygon Hotel), 2 p.m.

Feb. 25th.—Annual Meeting of the South-Eastern Division, N.V.M.A., at Tunbridge Wells (Mount Ephraim Hotel), 2.30 p.m.

Feb. 25th.—Annual Meeting of the Lancashire Division, N.V.M.A., at Liverpool (Geology Lecture Theatre, Brownlow Street), 2.30 p.m.

Feb. 26th.—Meeting of the Dumfries and Galloway Division, N.V.M.A., at Dumfries (Cairndale Hotel), 2.15 p.m.

Feb. 27th.—Annual Meeting of the Royal Counties Division, N.V.M.A., at Reading (Caversham Bridge Hotel), 2.30 p.m.

Mar. 3rd.—Meeting of the N.V.M.A. Technical Development Committee, at 36, Gordon Square, W.C.1, 11 a.m.

April 7th, 8th, 9th.—N.V.M.A. Committees and Council.

Sept. 8th to 15th (inclusive).—N.V.M.A. Congress at Southport.

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N.V.M.A. Southport Congress, 1948

Scientific Exhibition.—A scientific exhibition is being organised and the Provisional Committee would be glad to receive any photographs and sketches of interesting cases or unusual instruments, as well as the loan of X-ray films of similar value. These should be sent to the Hon. Local Secretary, Mr. H. Raynor Hewetson, M.R.C.V.S., 26, Princes Street, Southport.

Interpreters.—The Local Secretary would also like to hear from any members intending to be present at the Congress who are willing to act as interpreters and the languages in which they are able to give such assistance if required.

Sports.—It is desired to ascertain the numbers, ages and sexes of children that may be brought to the Congress, so that some sports arrangements may be made for them. In this matter, too, members are requested to send the information direct to the Local Secretary.

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Correspondence with Divisional Petroleum Officers

It is understood that in some of the offices of Divisional Petroleum Officers envelopes are now opened by machinery and, as a consequence, letters from members of the profession bearing the word "veterinary" on the envelope are losing the priority of treatment that that indication has achieved. It is therefore suggested that in future members should insert "VETERINARY" in bold capitals at the top of any forms and letters they submit to Divisional Petroleum Officers in order that their title to some priority of attention may be preserved.

* * * * *

Contagious Abortion Sale Rules

Experience gained in the operation of the sale rules which were drawn up by the National Cattle Breeders' Association after consultation with the National Veterinary Medical Association and the Ministry of Agriculture has disclosed two difficulties which have caused some concern but which can be avoided.

Apparently it has not been appreciated by all that the rules, for practical purposes, debar the entry of a bull which has been vaccinated. During the discussions which preceded the drafting of the rules, it was unanimously agreed that it was inadvisable to vaccinate bulls. Therefore, they provided only for the entry of males which pass the agglutination test. No provision is made to permit the entry of the vaccinated bull which reacts to the test. Bulls which may be entered for a Society Sale should, then, not be vaccinated.

The second difficulty relates to the vaccination of females over eight months old. The rules state that these animals must *pass* the agglutination test within 14 days of vaccination. Particularly since some animals give an agglutination of 1 in 10 only (an indefinite reaction) and must give no greater reaction at a subsequent test two to four weeks later before a negative certificate is issued, it is inadvisable to vaccinate before the result of the blood test is known, if the animal may subsequently be intended for entry at a Society Sale.

* * * * *

The Profession and the Pig-keeper

A meeting was held on January 29th, at 36, Gordon Square, between representatives of the N.V.M.A. and of the National Pig Breeders' Association and the Small Pig Keepers' Council, respectively. The meeting was arranged for the purpose of discussing in what ways the profession could best help pig-keepers, particularly with regard to preventive medicine and the possibility of locally arranged voluntary panel schemes.

The President, Mr. L. Guy Anderson, was in the chair.

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Visit to Denmark (1948) by the Children of Veterinary Surgeons

As was intimated in our issue of last week, the Danish Veterinary Association has once again invited children of British veterinary surgeons to go to Denmark for a holiday this summer. They have, in addition, most generously offered to pay the children's expenses from the date of their landing in Denmark to the date of their departure because, owing to the present currency restrictions at this end, no money can be taken out of England to Denmark; return tickets only could be bought for the children. As members will be aware, the ban on travel abroad, with money, is to be lifted for some countries, but it is not certain yet whether

Denmark will be one of them. If it is, well and good; if it is not, the children will be able to go just the same through the generosity of our Danish veterinary colleagues. It is hoped that at some future date, Danish children will be invited back to this country as our guests in exchange.

The suggested number for the party is 20 and the Danish Veterinary Association, through an announcement in their journal, are enquiring what ages the hosts and hostesses would like their children-guests to be.

Meantime, owing to the urgent necessity of making at least some preliminary arrangements with Messrs. Cook, would members kindly notify the General secretary, N.V.M.A., 36, Gordon Square, London, W.C.1, as soon as possible if they are interested. The period of the holiday will probably be early August to early September.

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PERSONAL

Births.—Brown.—At Elsie Inglis Memorial Hospital, Edinburgh, on January 31st, 1948, to Dorothy (*née* Glass), wife of David A. Brown, M.R.C.V.S., 281, St. John's Road, Corstorphine, Edinburgh, a daughter; both well.

Brown.—On February 4th, 1948, to Rosemarie, wife of Roger Brown—a son, Dorian David.

Constance.—On February 9th, 1948, at Malmesbury Hospital, to Margaret Jean, wife of L. Constance, M.R.C.V.S.—a sister for Susan and Elizabeth.

Marriages.—Birtwhistle—Whitney.—On January 14th, 1948, at St. Stephen's Church, Acomb, York, John Frederick Birtwhistle, M.R.C.V.S., second son of Dr. and Mrs. F. P. H. Birtwhistle, of Barton-on-Humber, Lincs., to Joan Whitney, S.R.N., only daughter of Mr. and Mrs. A. Whitney, of Acomb, York.

Moody—Barnacle.—At Corley Church, Nr. Coventry, on January 23rd, 1948, Frank C. Moody, B.Sc., M.R.C.V.S., Sherburn-in-Elmet, Leeds, to Margaret Honor Barnacle (Sister Q.A.I.M.N.S./R.) of Corley, Coventry.

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GENERAL OBITUARY

Lord Derby

In the death, on Wednesday of last week, of the seventeenth Earl of Derby, all classes sincerely mourn the loss of a great English aristocrat who avidly seized every chance of serving his country afforded him by his great position. Of all the many parts he played so well—as soldier, sportsman, Cabinet Minister, Ambassador in Paris—none became him more, because he enjoyed it so, or more greatly endeared him to the people, than that of the bluff Lancashire man who, year after year, dominated British sport. No Grand National, Derby or St. Leger was complete without him and he was outstanding as an owner and breeder of the thoroughbred, inheriting to the full that devotion to the turf which had been conspicuous in his ancestors.

Lord Derby was the first of the Earls to win the race named after them since shortly after it was first run at Epsom. Sansovino broke the spell in 1924—at long last repeating the triumph of the twelfth Earl who, with Sir Peter Teazle, won the great race in 1787. Hyperion was the next winner in the most popular of all racing colours—black, white cap—in 1933, and that great little horse has turned out huge numbers of winners since then and produced a fortune in stud fees. Among the best horses owned by Lord Derby was Stedfast, who was second in both the Two Thousand Guineas and the Derby, and then ran eight times during the season without a failure. In the following year he won six of his eight races.

The foundations of Lord Derby's great success as a breeder were laid in 1894 when, at the sale of the Duchess of Montrose's yearlings, his father bought Canterbury Pilgrim and the brood mare Broad Corrie. From Canterbury Pilgrim and Gondolette have descended nearly all Lord Derby's great horses and he has had few winners that he has not bred himself. He headed the list of breeders in the years 1927-30, 1933 and 1938. Phalaris was leading sire in 1925 and 1928, Fairway in 1936, 1939 and 1943, and Hyperion in 1940, 1941 and 1942, and in addition to these the influence of such sires as Chaucer, Swynford, Pharos, Stedfast and Colorado on British bloodstock has been beyond assessment.

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ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

Sheep Scab:

Lancashire.—Heights Farm and Pasture House Farm, Littleborough, Lancs. (Feb. 4th).

INTERNATIONAL CONGRESSES ON TROPICAL MEDICINE AND MALARIA

The Fourth Congress will be held at Washington, D.C., from May 10th to 18th, 1948.

The Convener of the Section on Tropical Veterinary Medicine is Dr. R. A. Kelser, School of Veterinary Medicine, University of Pennsylvania, 39th Street and Woodland Avenue, Philadelphia 4, Pennsylvania.

* * * * *

RACEHORSE OWNERS' PETROL

The Ministry of Fuel and Power has informed the Racehorse Owners' Association that, in view of the importance of the bloodstock industry, racing under Jockey Club and National Hunt Committee rules will be regarded as a business. "This means," says the Ministry's statement, "that where it can be shown that allowances of petrol are necessary to enable the owner to carry on his business, such allowances may be granted subject to the general principles governing the rationing procedure." It must be shown that the use of alternative forms of transport is not reasonably practicable.

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Scheme for the Control of Diseases of Dairy Cattle

Statement Showing Position of "Attested Herds" in each County as at December 31st, 1947

County	Total Cattle as at 4.6.47	Certificates of Attestation in force as at 31.12.47	Number of Cattle covered by Certificates of Attestation as at 31.12.47	Percentage of Attested Cattle to Total Cattle
England				
Bedford	45,187	53	3,366	7·4
Berks	79,656	315	19,009	23·9
Buckingham	106,371	159	10,223	9·6
Cambridge	29,310	58	3,500	11·9
Isle of Ely	18,937	14	682	3·6
Chester	235,479	262	15,556	6·6
Cornwall	250,224	235	9,341	3·7
Cumberland	209,000	783	39,118	18·7
Derby	178,926	101	6,120	3·4
Devon	374,657	391	17,296	4·6
Dorset	137,196	355	21,531	15·7
Durham	111,203	228	10,502	9·4
Essex	120,106	336	18,700	15·6
Gloucester	174,888	256	15,116	8·6
Hampshire	139,381	389	21,686	15·6
Isle of Wight	19,992	31	1,634	8·2
Hereford	125,017	184	11,125	8·9
Hertford	57,286	148	11,287	19·7
Huntingdon	27,631	17	1,580	5·7
Kent	117,619	250	13,347	11·3
Lancaster	267,975	280	13,853	5·2
Leicester	154,580	107	6,452	4·2
Lincoln (Holland)	25,769	—	—	—
Lincoln (Kesteven)	67,455	10	594	0·9
Lincoln (Lindsey)	156,173	29	1,662	1·1
London	120	—	—	—
Middlesex	7,024	15	993	14·1
Norfolk	171,977	212	16,616	9·7
Northampton	145,281	56	3,945	2·7
Soke of Peterborough	7,082	—	—	—
Northumberland	181,836	199	11,509	6·3
Nottingham	107,240	68	3,671	3·4
Oxford	97,376	313	18,027	18·5
Rutland	20,071	7	498	2·5
Salop	261,162	281	17,680	6·8
Somerset	297,602	531	29,781	10·0
Stafford	223,893	99	5,278	2·4
Suffolk, East	75,125	85	5,310	7·1
Suffolk, West	34,021	84	6,073	17·9
Surrey	49,448	226	11,930	24·1
Sussex, East	100,836	210	10,287	10·2
Sussex, West	67,241	176	9,132	13·6
Warwick	144,176	137	8,925	6·2
Westmorland	90,754	616	28,910	31·9
Wilts	183,626	248	17,981	9·8
Worcester	93,899	90	5,686	6·1
York, East Riding	124,949	26	935	0·7
York, North Riding	231,274	408	15,321	6·6
York, West Riding	329,835	367	16,644	5·0
Total, England	6,275,866	9,445	518,412	8·3
Wales				
Anglesey	53,766	28	1,310	2·4
Brecon	43,363	148	5,286	12·2
Caernarvon	58,435	122	4,615	7·9
Cardigan	70,699	3,302	51,288	72·5
Carmarthen	124,842	4,030	80,621	64·6
Denbigh	95,340	384	10,349	10·9
Flint	57,897	52	2,709	4·7
Glamorgan	70,704	149	4,282	6·1
Merioneth	38,851	841	16,345	42·1
Monmouth	63,949	111	5,160	8·1
Montgomery	90,615	327	12,156	13·4
Pembroke	95,126	1,561	33,869	35·6
Radnor	35,159	44	1,130	3·2
Total, Wales	898,746	11,099	229,120	25·5
Total, England and Wales	7,174,612	20,544	747,532	10·4

County	Total Cattle as at 4.6.47	Certificates of Attestation in force as at 31.12.47	Number of Cattle covered by Certificates of Attestation as at 31.12.47	Percentage of Attested Cattle to Total Cattle
SCOTLAND				
Aberdeen	206,252	116	10,126	4·9
Angus	58,018	76	7,312	12·6
Argyll	59,974	406	14,866	24·8
Ayr	144,734	1,952	114,397	79·0
Banff	50,072	25	1,826	3·6
Berwick	29,164	33	2,163	7·4
Bute	10,446	327	8,771	84·0
Caithness	24,667	134	2,137	8·7
Clackmannan	4,295	24	1,492	34·7
Dumfries	94,113	1,075	57,935	61·6
Dunbarton	16,046	154	8,310	51·8
East Lothian	14,057	21	1,892	13·5
Fife	57,845	190	12,816	22·2
Inverness	50,261	45	2,668	5·3
Kincardine	33,736	31	2,695	7·9
Kinross	7,749	38	1,832	23·6
Kirkcudbright	69,070	615	41,159	59·6
Lanark	90,691	902	52,404	57·8
Midlothian	22,157	126	6,383	28·8
Moray	27,775	37	2,897	10·4
Nairn	7,923	14	934	11·8
Orkney	45,301	145	3,135	6·9
Peebles	10,564	120	5,246	49·7
Perth	81,639	150	9,063	11·1
Renfrew	30,780	277	14,804	48·1
Ross-shire	36,928	30	1,559	4·2
Roxburgh	30,545	35	1,987	6·5
Selkirk	5,268	24	842	16·0
Stirling	39,488	266	14,146	35·8
Sutherland	9,559	6	346	3·6
West Lothian	14,213	87	4,152	29·2
Wigtown	67,666	406	34,298	50·7
Zetland	7,608	1,945	7,804*	99·0*
TOTAL, SCOTLAND ..	1,458,604	9,892	452,397	31·0
TOTAL, GT. BRITAIN	8,633,216	30,436	1,199,929	13·9

* 99 per cent. of total cattle at 31.12.47 (since raised to 100 per cent.—*Editor*).

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the N.V.M.A.

"A NEW VIRUS DISEASE OF DOGS"

Sir,—May I be permitted to add my experiences to the discussion now going on in your columns about what Mr. Townson, on April 26th, 1947, called "Infectious Catarrhal Fever in Dogs" and which Major Kirk calls "The New Virus Disease in Dogs"?

It seems now well established that the veterinary profession is confronted with the appearance of a new virus disease which might or might not be distemper. On May 10th, 1947, you published in your columns a letter from me in which I stated my conviction that we are dealing with a distorted form of canine distemper. Whether that is true or not I cannot prove, but it seems, for reasons outlined below, to be true that we definitely are dealing with a virus disease.

The condition in question has a very protracted initial period which usually lasts between three and four weeks. During that period the only symptoms to be seen are malaise connected with a high temperature, *i.e.*, inappetence, mopiness and slight change of temperament.

The second phase is marked by rheumatoid pains in several or all voluntary muscles of the body. The third period shows chorea of the encephalitic type, *i.e.*, not a true persistent chorea but one which has to be regarded as a symptom of encephalitis and not as a chorea *per se*. *During the second period*, which lasts approximately three days to a fortnight, *the paws of all four feet become hard and swollen*—not the horny skin but the cushion itself. This usually starts at both hind legs to be followed by the front pads. The swelling is not painful and not hot. The animals are restless and afraid and more or less resemble patients with a high hyper-thyroidosis.

During the whole period of the disease there are bouts of diarrhoea and pneumonia. Both conditions respond to treatment but recur. Before the outbreak of the encephalitic symptoms, the temperature drops from approximately 103° to normal, only to revert again just before the outbreak of fits. The latter increase in frequency so much that the owners usually decide to have the animals put to sleep.

At *post-mortem* examination macroscopic findings vary, since pneumonia, enteritis and even nephrosis may or may not be present. Microscopically the most important changes seem to occur in the cerebrum where inclusion bodies are found in great numbers, sometimes three to four per cell in the big ganglion cells. These inclusion bodies seem to attack or enter the ganglion cell from the outside, pressing the ganglion cell aside, finally destroying it completely. The size of the inclusion bodies is about double the size of the nucleolus of the ganglion cell; their structure is easily seen under the microscope. They vary in shape, according to the apparent resistance put up by the ganglion cell or the latter's state of health, from round to kidney shape. I could not trace any inclusion bodies in the cerebellum.

The presence of inclusion bodies in the brain seems to indicate, as stated above, that we are dealing with a virus disease. From the microscopic slides in my possession it appears that only the cerebrum is attacked and not the cerebellum or the spinal cord. The structure of ganglion cells visible under the microscope seems to make a return to normal in the dog impossible once the brain is affected. With regard to my good friend Major Kirk's suggestion of importing Italian serum, I am afraid, with all due respect to his greater knowledge, that virus diseases can change so much from country to country that we ought to establish first what strain of virus we are dealing with and furthermore if the virus produces an immunity.

We have apparently gone through a period in which all virus diseases from poliomyelitis to Newcastle disease have been on the increase. Might it not be possible that this general increase in virus diseases has produced our new disease and an increase in poliomyelitis without there being an interrelation between the two?

I am certain that all general practitioners who have to deal with this hopeless condition would welcome a thorough investigation.

I am, Sir,

91, Watford Way, Yours faithfully,
Hendon, N.W.4 E. VON LUSTIG-LENDVA.
February 2nd, 1948.

* * * * *

AN "EXCHANGE VISIT" INVITATION FROM PRAGUE

Sir,—As an official veterinary surgeon to the Municipality of Prague, I am anxious to spend four to six weeks in Great Britain in order to become acquainted with the progress achieved there in the sphere of veterinary science (and at the same time to improve my knowledge of the English language). I trust that I may find a British colleague desirous of pursuing a similar aim in Czechoslovakia, and that my plan could be realised on a reciprocity basis, *i.e.*, my British colleague could come to this country and stay here as my guest for approximately the same period for which I would, in turn, be his guest in Great Britain. In this manner we could avoid the considerable difficulties connected with obtaining the necessary foreign exchange. The time as well as all other terms could easily be mutually agreed upon. If interested, my British colleague might have an opportunity of attending the Sokol Congress to be held in Prague in the early days of July—a striking display of gymnastics and of Czechoslovak physical culture.

It might be of interest to know that I worked during four years in Ecuador, S. America, at the invitation of the government of that country.

Thanking you, I remain,
Yours faithfully,
JOSEF VONDRACEK, MED. VET. DR.

Prague XIX., Rooseweltova 34,
Czechoslovakia.
January 30th, 1948.

DISEASES OF ANIMALS ACTS, 1894 TO 1937, AND AGRICULTURE ACT, 1937 (PART IV).

Summary of Returns of Confirmed Outbreaks of Scheduled (Notifiable) Diseases

Period	Anthrax	Foot-and-mouth	Fowl Pest	Parasitic Mange*	Sheep Scab	Swine Fever
Total 1st to 15th January 1948 ...	3	—	37	—	6	2
Corresponding period in—						
1947 ...	1	20	—	—	4	2
1946 ...	9	4	—	1	3	19
1945 ...	9	8	—	1	7	46

NOTE.—The figures for the current year are approximate only.
* Excluding outbreaks in Army Horses.

Tuberculosis Order of 1938

The number of bovine animals slaughtered under the Tuberculosis Order of 1938 during the period October 1st to December 31st, 1947, was 1,591.